

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002214**Date Inspected:** 06-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Fabrication**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Orthotropic Box Girder (OBG) and Tower Fabrication:

New tower fabrication shop:

The QA Inspector performed ultrasonic inspection of OBG tower complete joint penetration welds SSDI SA16 F/G-6A, ESDI SA234 A/B-10A, SSDI SA326-1A, NSDI SA226-10A, NSDI SA270-1A, NSDI SA334 A/B-2A and the QA Inspector used a 45 degree transducer and observed class "A" indications near the top surface of all six of these welds, in the vicinity of the weld crowns. Scans with the 70 degree transducer did not reveal any unacceptable indications. See the TL-6027 "Ultrasonic Test Report" dated today and the photograph below for additional information.

Note: Due to poor weather conditions, ZPMC and public ferry transportation to and from the work site on Changxing Island was not available and the QA Inspector continued monitoring of ZPMC activities during the start of the April 07, 2008 day shift.

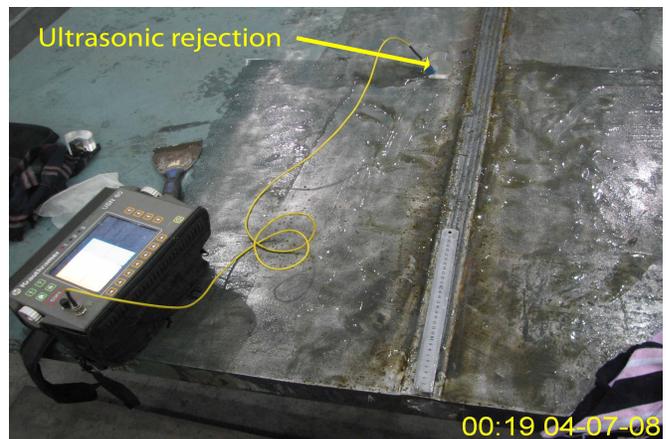
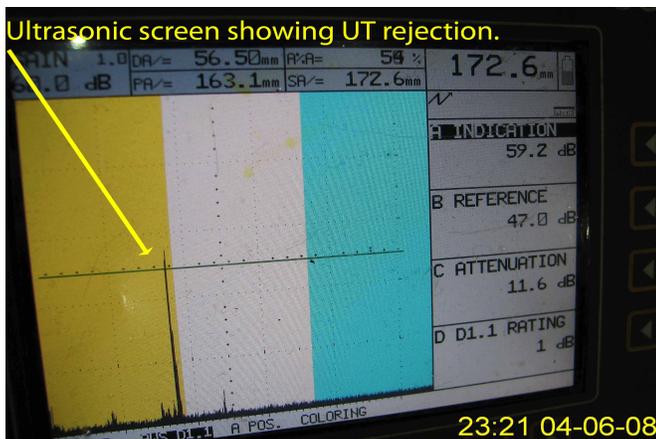
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The QA Inspector observed six ZPMC welders making gas metal arc weld (GMAW) groove root pass welds on six OBG deck plate DP049-001 closed rib stiffener welds at the same time. ZPMC has multiple flux cored welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. The QA Inspector observed a welding travel speed of approximately 530 mm per hour, the base material has a minimum preheat temperature of 20° C and all six shielding gas flow meters appear to be within an acceptable range as listed in the welding procedure specification. As the welding commences, each of the welders is responsible one of the flux cored welding heads. Welder Mr. Xiang Huan Feng, stencil 59416 completed weld DP049-001 with a welding current of approximately 365 amps and 30.8 volts. Welder Mr. Fong Chung Hong, stencil 59371 completed weld DP049-002 with a welding current of approximately 375 amps and 30.3 volts. Welder Mr. Xu Guo Yin, stencil 59443 completed weld DP049-005 with a welding current of approximately 375 amps and 29.4 volts. Welder Mr. Xiang Jie, stencil 59378 completed weld DP049-006 with a welding current of approximately 380 amps and 30.7 volts. Welder Mr. Guo Xin Dong, stencil 59361 completed weld DP049-009 with a welding current of approximately 380 amps and 30.2 volts. Welder Mr. Jiang Ting Guang, stencil 62265 completed weld DP049-010 with a welding current of approximately 365 amps and 30.4 volts. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed six ZPMC welders making gas metal arc weld (GMAW) groove root pass welds on four OBG deck plate DP490-001 closed rib stiffener welds at the same time. ZPMC has multiple flux cored welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. The QA Inspector observed a welding travel speed of approximately 540 mm per hour, the base material has a minimum preheat temperature of 20° C and all six shielding gas flow meters appear to be within an acceptable range as listed in the welding procedure specification. As the welding commences, each of the welders is responsible one of the flux cored welding heads. Welder Mr. Chen Jie, stencil 59468 completed weld DP490-001 with a welding current of approximately 355 amps and 30.5 volts. Welder Mr. Wi Han Chang Hou, stencil 59464 completed weld DP490-002 with a welding current of approximately 355 amps and 30.2 volts. Welder Ms. Yuen Feng Chuan, stencil 59355 completed weld DP490-005 with a welding current of approximately 370 amps and 30.4 volts. Welder Mr. Song Yin Shu, stencil 59421 completed weld DP490-006 with a welding current of approximately 370 amps and 30.0 volts. Items observed by the QA Inspector appear to comply with project specifications.



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Summary of Conversations:

See above for summary of conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowey (858) 344-2712, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Hager,Craig	QA Reviewer
